

CITY OF THOUSAND OAKS

2018 Wastewater Financial Plan Update

Final Report / June 23, 2017





445 S. Figueroa Street
Suite #2270
Los Angeles, CA 90071

Phone 213.262.9300
Fax 213.262.9303

www.raftelis.com

June 23, 2017

Mr. Clifford G. Finley
Deputy Director of Public Works
City of Thousand Oaks
2100 Thousand Oaks Blvd
Thousand Oaks, CA 91362

Subject: 2018 Wastewater Enterprise Financial Plan Update

Dear Mr. Finley:

Raftelis Financial Consultants, Inc. (RFC) is pleased to present this report on the wastewater financial plan update study (Study) to the City of Thousand Oaks (City). We are confident that the update to the financial plan and revenue adjustments result in fair and equitable rates to the City's customers and comply with the requirements of Proposition 218.

The Study involved a comprehensive review of the City's financial plan, capital needs, and reserve funds.

It was a pleasure working with you and we wish to express our thanks to you, Mr. Jay Spurgin, Ms. Nancy Arrieta, and participating staff members of the City for the support and cooperation extended throughout the Study. If you have any questions, please call me at (213) 262-9304.

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.

A handwritten signature in black ink, appearing to read 'Sanjay Gaur'.

Sanjay Gaur
Vice President

A handwritten signature in black ink, appearing to read 'Akbar Alikhan'.

Akbar Alikhan
Senior Consultant

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GLOSSARY

Terms	Descriptions
AWWA	American Water Works Association
CIP	Capital Improvement Projects
COS	Cost of Service
CPI	Consumer Price Index/Indices
CY	Calendar Year
ENR CCI	Engineering News Records Construction Cost Indices
FY	Fiscal Year (July 1 – June 30)
M1 Manual	“Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1” published by AWWA
MFR	Multi-Family Residential
O&M	Operations and Maintenance
PAYGO	Pay-As-You-Go
RFC	Raftelis Financial Consultants, Inc.
SFR	Single Family Residential
WW	Wastewater

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1. EXECUTIVE SUMMARY

1.1 STUDY BACKGROUND

In 2012, the City of Thousand Oaks engaged RFC to conduct a Wastewater Financial Plan and Cost of Service Study to develop a sustainable reserve policy and a solvent financial plan for the Wastewater (WW) Enterprise and to establish rates that are equitable and in compliance with Proposition 218. RFC completed the initial Financial Plan and Cost of Service Study in 2013. As a result of the 2013 Study, the costs assigned to each customer class were realigned to better reflect the actual cost of providing service to said customer class. The City then asked RFC to conduct an update to the financial plan analysis and any necessary revenue adjustments in 2015. That study resulted in the current rates utilized by the City today. The City has again asked RFC to update this analysis and propose any necessary rate adjustments in order to meet the Wastewater Utility's revenue requirements.

For the Wastewater Enterprise, there are several significant capital improvement plan (CIP) projects planned, such as major interceptor rehabilitation and biosolids dewatering/drying improvements. The City has instructed RFC to propose the level of wastewater rates needed for financial sufficiency for the projected operating and capital expenses and other financial obligations.

1.2 OBJECTIVES OF THE STUDY

The major objectives of the study include the following:

1. Update the financial plan for the Wastewater Enterprise to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital improvement plan (CIP) needs, and maintain the financial health of the wastewater enterprise;
2. Review reserve fund targets;
3. Develop fair and equitable rates based on the necessary revenue adjustment percentage

This executive summary provides an overview of the study and includes findings and recommendations for the wastewater reserve policy, financial plan, and rates.

1.3 RESULTS AND RECOMMENDATIONS

1.3.1 Reserve Policy

RFC recommends that the City maintain the reserve policies established in the previous study, except to increase capital reserves to 5% of asset value from 2.5%, to be consistent with the Water Capital Reserve.

A reserve policy provides a basis for the City to cope with fiscal emergencies such as revenue shortfalls, asset failure, natural disaster, etc. It also provides guidelines for sound financial management with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs and emergencies.

RFC recommends that the City maintain three types of reserves for its wastewater utility: 1) O&M Reserve - to provide working capital to support the operation, maintenance, and administration of the utility; 2)

Emergency Reserve - to allow the utility to provide uninterrupted service in light of a fiscal or physical emergency; and 3) Capital Reserve - used to fund future obligations that are necessary for maintaining reliable infrastructure.

Table 1-1 lists the recommended reserve policies for the wastewater enterprise. Reserve targets are maintained not only to provide sufficient working and emergency capital, but to maintain sufficient levels of days cash on hand for debt coverage. Note that the Wastewater CIP Fund previously had a target of 2.5%, which the City has decided to increase to 5% of the asset value to be consistent with the Water Enterprise.

Table 1-1: Recommended Wastewater Reserve Policy

Reserve	Recommended Policy	2018 Target Level
Fund 621 – Wastewater Operating Fund		
Operating	25% of Operating Budget	\$3.9M
Fund 624 – Wastewater Capital Fund		
Emergency	Replacement cost of Chlorine Contact Chamber and Filter Influent Pumps (Most Critical Infrastructure)	\$2.4M
CIP	5% of Asset Value*	\$18.2M
Total Wastewater Fund	598 days of cash¹	\$24.5M

* Increased from 2.5% to be consistent with the Water Capital Fund

1.3.2 Proposed Financial Plan

Table 1-2 shows the proposed revenue adjustments for the Wastewater Enterprise for the next five fiscal years. The revenue adjustments for wastewater include needed revenue to fund approximately \$15.5 million of annual operational costs and an estimated \$5.4 million of programmed capital improvements over the five-year Study period. In addition, there is approximately \$3.4 million in carryover from FY 2017 and RFC’s estimation includes wastewater fleet replacement from Fund 629.

Table 1-2: Revenue Adjustments for Wastewater Enterprise

Enterprise	Revenue Adjustments					5-Year CIP + FY 2017 Carryover
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	
Wastewater	1%	1%	1%	1%	1%	\$30 M

¹ Days of cash defined as total reserves divided annual O&M Expenses, multiplied by 365 days.

1.3.3 Factors Affecting Revenue Adjustments

The following items affect the Wastewater Enterprise’s revenue requirement (i.e. costs) and thus its rates. The City’s costs include Operation and Maintenance (O&M) expenses and capital expenses.

- » **Capital Funding of System Improvements:** The City’s wastewater collection infrastructure is aging and major improvements to its capital infrastructure are required.
- » **Reserve Funding:** The Wastewater Enterprise has operating, emergency, and capital reserves – collectively amounting to \$24.5M in funds that must be set aside each year.
- » **Debt Coverage Ratio:** Per the Wastewater Enterprise’s debt covenants, it is required to maintain a debt coverage ratio of 1.25 or higher.

Figure 1-1 illustrates the operating position of the Wastewater Enterprise, where the expenses and reserve funding are shown by stacked bars and total revenues at current rates and proposed rates are shown by red and green lines, respectively. Under the proposed rate adjustments shown in Table 1-2, the Wastewater Enterprise will be able to contribute more to reserves, which are required to fund capital needs and to maintain healthy reserve levels.

Figure 1-1: Operating Financial Plan

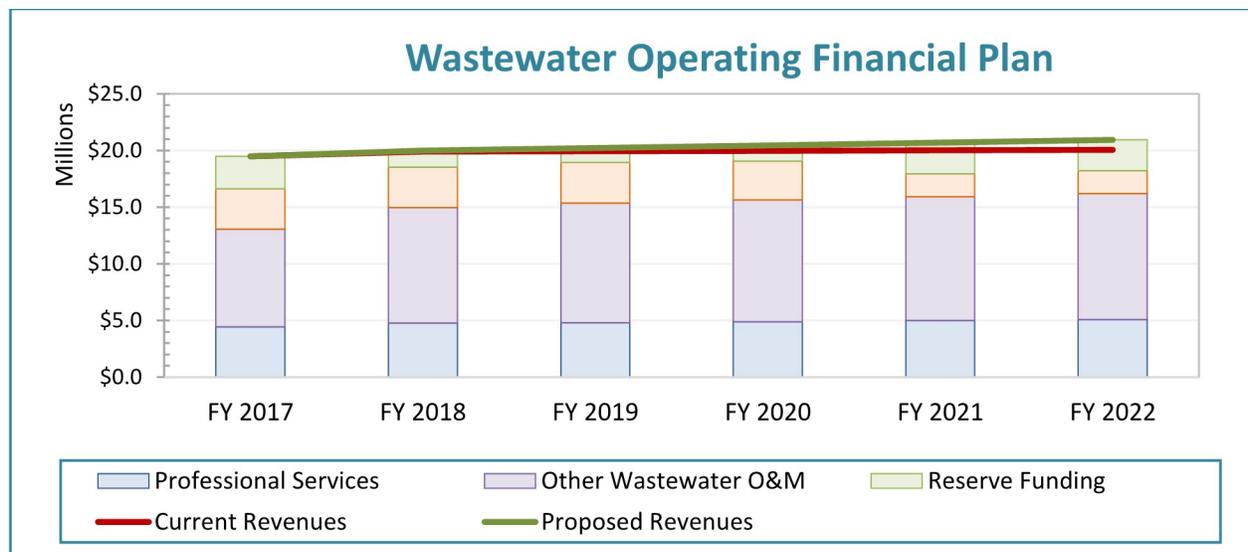
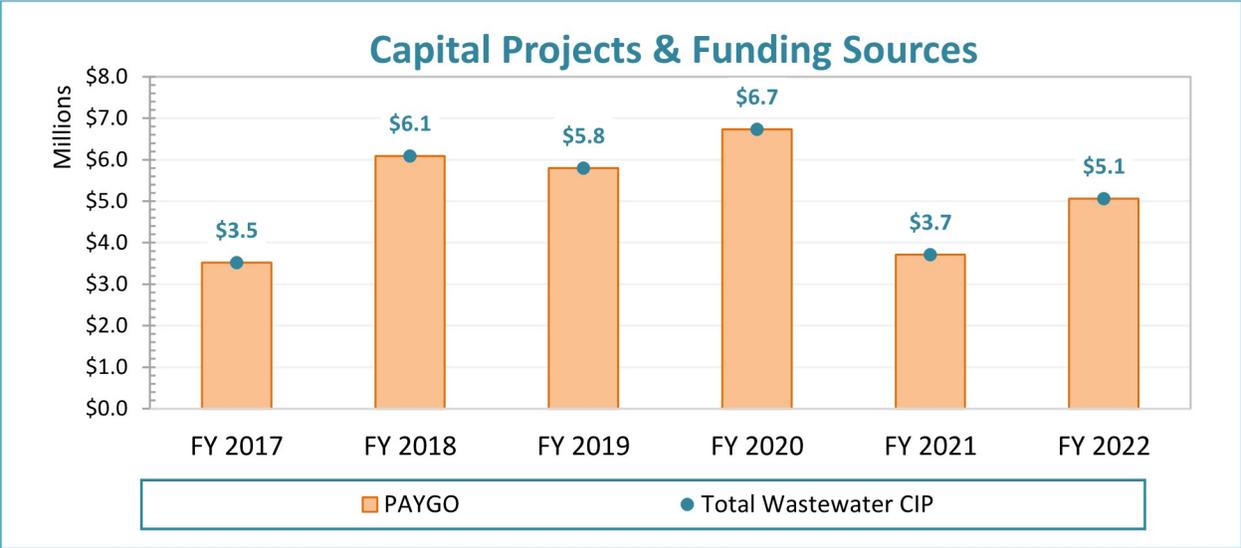


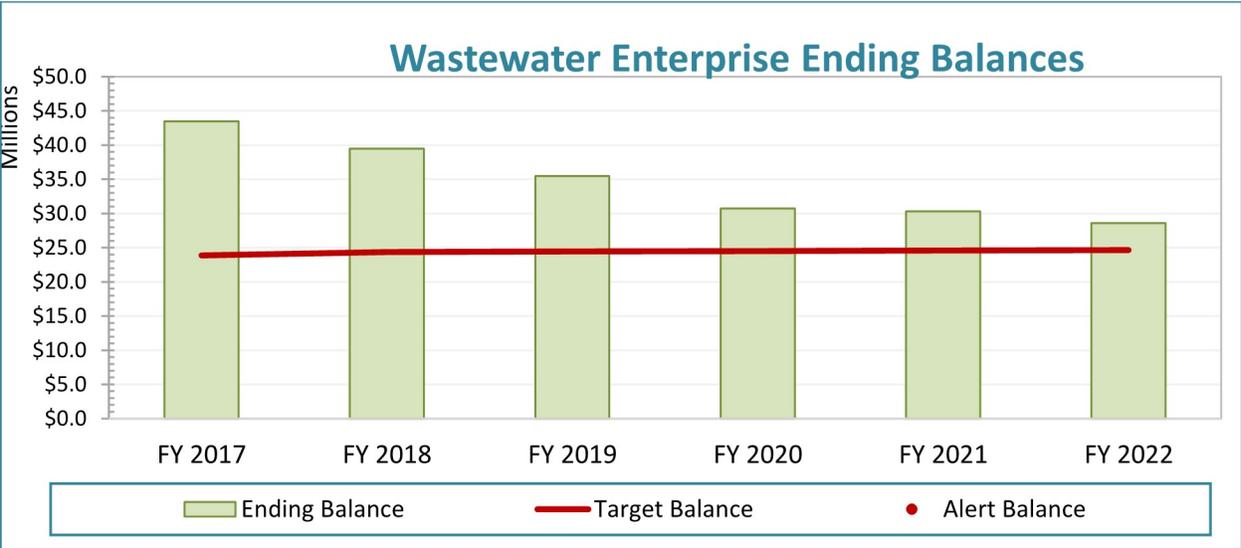
Figure 1-2 summarizes the projected CIP expenses, which have an average CIP expenditure of \$5.4M for the 5-year planning horizon of FYs 2018-2022. The proposed capital improvement plan will be funded entirely through rate revenues (Pay As You Go or PAYGO) and reserves.

Figure 1-2: Capital Improvement Program Funding²



The ending fund balance for the Wastewater Enterprise includes the beginning balances plus net cash flow for the year. The ending fund balance for the Wastewater Enterprise is projected and shown in Figure 1-3, where the red line indicates the target reserve balance as recommended by the reserve funding levels summarized above.

Figure 1-3: Ending Fund Balance



² RFC’s projected capital expenses include a capital escalation factor of 2% and therefore may not align with the City’s adopted budget. In addition, Figure 1-2 includes asset replacement costs from Fund 629.

1.3.4 Proposed Rates

The City wishes to maintain the rate structure defined in the previous study and to adjust these rates to meet the City's revenue needs. RFC proposes a 1% annual revenue adjustment for each of the five years in the Study period. Note that while the study period encompasses FYs 2018-2022, the City adopts only two years' rates, therefore Table 1-3 only shows the rates for FYs 2018-2019, resulting from this revenue adjustment.

Table 1-3: Proposed Monthly Fixed Charges for FY 2018 and FY 2019

	FY 2017 Current	FY 2018 Proposed	FY 2019 Proposed
Residential	\$28.78	\$29.07	\$29.37
Multi Family	\$28.78	\$29.07	\$29.37
Commercial Spaces	\$28.78	\$29.07	\$29.37
Commercial	\$28.78	\$29.07	\$29.37
School	\$20.16	\$20.37	\$20.58
Market / Mortuary	\$53.16	\$53.70	\$54.24
Restaurant (grease traps)	\$34.41	\$34.76	\$35.11
Restaurant / Bakery	\$53.08	\$53.62	\$54.16
Industrial High Flow	\$18.80	\$18.99	\$19.18
Car Wash	\$20.19	\$20.40	\$20.61

2. INTRODUCTION

2.1 STUDY BACKGROUND

In 2012, the City of Thousand Oaks engaged RFC to conduct a Wastewater Financial Plan and Cost of Service Study to develop a sustainable reserve policy and a solvent financial plan for the Wastewater (WW) Enterprise and to establish rates that are equitable and in compliance with Proposition 218. RFC completed the initial Financial Plan and Cost of Service Study in 2013. As a result of the 2013 Study, the costs assigned to each customer class were realigned to better reflect the actual cost of providing service to said customer class. The City then asked RFC to conduct an update to the financial plan analysis and any necessary revenue adjustments in 2015. That study resulted in the current rates utilized by the City today. The City has again asked RFC to update this analysis and propose any necessary rate adjustments in order to meet the Wastewater Utility's revenue requirements.

For the Wastewater Enterprise, there are several significant capital improvement plan (CIP) projects planned, such as major interceptor rehabilitation and biosolids dewatering/drying improvements. The City has instructed RFC to propose the level of wastewater rates needed for financial sufficiency for the projected operating and capital expenses and other financial obligations, and to develop a CIP charge to support upcoming capital expenses.

2.2 OBJECTIVES OF THE STUDY

The major objectives of the study include the following:

4. Update the financial plan for the Wastewater Enterprise to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital improvement plan needs, and improve the financial health of the wastewater enterprise;
5. Review reserve fund targets;
6. Develop fair and equitable rates based on the necessary revenue adjustment percentage

2.3 LEGAL REQUIREMENTS AND RATE SETTING METHODOLOGY

3.1.1 California Constitution - Article XIII D, Section 6 (Proposition 218)

Proposition 218, reflected in the California Constitution as Article XIII D, was enacted in 1996 to ensure that rates and fees are reasonable and proportional to the cost of providing service. The principal requirements for fairness of the fees, as they relate to public water and wastewater services are as follows:

1. A property-related charge (such as water and wastewater rates) imposed by a public agency on a parcel shall not exceed the costs required to provide the property related service.

2. Revenues derived by the charge shall not be used for any purpose other than that for which the charge was imposed.
3. The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing, when the agency considers all written protests against the charge.

In 2013, RFC performed the COS Study for the Wastewater Enterprise. This Study continues with the same rate structure and increases all rates by a uniform percentage factor based on the City's updated revenue requirements.

3. GENERAL ASSUMPTIONS

3.1 INFLATION

The Study period for the Study is from Fiscal Year (FY) 2018 to 2022. Various types of assumptions and inputs were incorporated into the Study. These assumptions were based on discussion with and/or direction from City staff (Staff) including projected accounts and annual growth rates in consumption for different customer classes, inflation factors, and other assumptions. The inflation factor assumptions are presented in Table 3-1 below. FY 2017 was the baseline year for all budgeted expenses, and therefore, does not require an inflation factor to project costs.

Table 3-1: Inflation Factor Assumptions

INFLATION FACTORS	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
General	0%	2%	2%	2%	2%	2%
Salary	0%	2%	2%	2%	2%	2%
Benefits	0%	4%	4%	4%	4%	4%
Electricity	0%	3%	3%	3%	3%	3%
Fuel	0%	2%	2%	2%	2%	2%
Capital	0%	2%	2%	2%	2%	2%

3.2 PROJECTED ACCOUNT GROWTH

Since the City is built out, it is anticipated that there will be minimal account growth over the Study period. The growth rate is based on staff estimates using historic trends. The projected account growth shown in Table 3-2. Note that all customer types are projected to have a 0.10% growth rate, with the exception of schools, which are not projected to add any accounts in the study period.

Table 3-2: Account Growth Rates

Customer Types	GROWTH RATE				
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Schools	0%	0%	0%	0%	0%
All Others	0.10%	0.10%	0.10%	0.10%	0.10%

3.3 RESERVE POLICY

RFC recommends that the City maintain the reserve policies established in the previous study, as detailed below.

A reserve policy is a written document that provides a basis for the City to cope with unanticipated reductions in revenues, offset fluctuations in costs of providing services, and fiscal emergencies such as revenue shortfalls, asset failure, and natural disaster. It also provides guidelines for sound financial management with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs, and emergencies. It also sets funds aside

for replacement of capital assets as they age and for new capital projects. Additionally, adopting and adhering to a sustainable reserve policy enhances financial management transparency and helps achieve or maintain a certain credit rating for future debt issues.

The appropriate amount of reserves and reserve types are determined by a variety of factors, such as the size of the operating budget, the amount of debt, the type of rate structure, frequency of customer billing, and risk of natural disaster. Thus, most reserves tend to fall into the following categories: operations & maintenance (O&M) cash flow, rate stabilization, CIP, and emergency.

Applying the proposed revenue adjustments from Table 4-8 to the current monthly fixed charges above yields the proposed monthly fixed charges for the Study period in Table 1-3. Note that while the table includes proposed rates for FYs 2020-2022, the City will only be implementing rates for FYs 2018-2019.

3.3.1 O&M Cash Flow (Fund 621)

The purpose of an O&M reserve is to provide working capital to support the operation, maintenance and administration of the utility. From a risk management perspective, the O&M reserve supports the Wastewater Enterprise's cash flow needs during normal operations and ensures that operations can continue should there be significant events that impact cash flows.

RFC recommends that the City maintain 90 days cash (25 percent of annual operating budget) for the Wastewater Operating Fund to ensure adequate working capital for operating expenses. With the exception of select commercial accounts, the City bills bi-monthly. The time gap between accounts receivables and actual cash expenses ranges from 60 to 120 days, warranting higher operational reserves than an agency that bills monthly. The budgeted O&M expenses for FY 2018 are \$15.5M, which translates into \$3.9M for 90 days of cash reserves for the Wastewater Operating Fund.

3.3.2 Capital Emergency (Fund 624)

The purpose of an emergency reserve is to allow the utility to provide uninterrupted service in a fiscal emergency, natural disaster or facility failure. An emergency reserve decreases risk by recognizing the high capital costs of the facilities and setting aside adequate funds to restart the system after an unanticipated event or replace an essential facility.

RFC recommends that \$2.4M be set aside for emergency use. Although this level of emergency reserve is sufficient for now, the reserve should be re-evaluated periodically as the system ages.

3.3.3 Capital Improvement Plan (Fund 624)

CIP reserves are used to fund future obligations that are necessary for maintaining a reliable infrastructure. Because wastewater utilities are highly capital-intensive enterprises, it is important to accurately estimate long-term CIP costs and develop a reserve to fund the eventual replacement of the system and new capital projects.

The total asset value for the Wastewater Enterprise was estimated at \$364M³ at the beginning of FY 2018. Based on discussions with Staff, the CIP reserve was set at 5% of the replacement value of wastewater-related assets. This is an increase from the current policy of 2.5% in order to be consistent with the Water Enterprise and to make more funds available for capital improvement expenses. For FY 2018, the CIP reserve requirement is \$18.2M.

3.3.4 Proposed Wastewater Reserves

Table 3-3 summarizes the recommended reserve policy for Wastewater Funds for adequate operating working capital, emergency use, and working capital for future CIP projects.

Table 3-3: Recommended Wastewater Reserve Policy

Reserve	Recommended Policy	2018 Target Level
Fund 621 – Wastewater Operating Fund		
Operating	25% of Operating Budget	\$3.9M
Fund 624 – Wastewater Capital Fund		
Emergency	Replacement cost of Chlorine Contact Chamber and Filter Influent Pumps (Most Critical Infrastructure)	\$2.4M
CIP	5% of Asset Value	\$18.2M
Total Wastewater Fund	598 days of cash⁴	\$24.5M

Applying the same methodology for determining the reserve target levels to all years of the Study period yield the following targets, found in Table 3-4 below.

Table 3-4: Reserve Targets for Study Period

Reserve	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Operating	\$3,875,111	\$3,950,364	\$4,020,491	\$4,091,887	\$4,164,575
Emergency	\$2,400,000	\$2,400,000	\$2,400,000	\$2,400,000	\$2,400,000
CIP	\$18,200,000	\$18,200,000	\$18,200,000	\$18,200,000	\$18,200,000
Total Target	\$24,475,111	\$24,550,364	\$24,620,491	\$24,691,887	\$24,764,575

³ Reserve policy utilizes the Replacement Cost Less Depreciation method depreciation.

⁴ Days of cash defined as total reserves divided annual O&M Expenses, multiplied by 365 days.

4. FINANCIAL PLAN

A review of a utility’s revenue requirements is a key first step in the rate design process. The review involves an analysis of annual operating revenues under the current rates, operation and maintenance (O&M) expenses, capital expenses, transfers between funds, debt requirements, and reserve requirements. This section of the report provides a discussion of the projected revenues, O&M and capital expenses, capital improvement financing plan, and revenue adjustments required to ensure the fiscal sustainability of the Wastewater Enterprise.

4.1 REVENUES FROM CURRENT RATES

The current rate structure was developed in FY 2013. The City’s wastewater service charge consists of a monthly fixed service charge based on customer class. Table 4-1 summarizes the current monthly fixed charges by class.

Table 4-1: Current Monthly Wastewater Service Charges

	FY 2017 Current
Residential	\$28.78
Multi Family	\$28.78
Commercial Spaces	\$28.78
Commercial	\$28.78
School	\$20.16
Market / Mortuary	\$53.16
Restaurant (grease traps)	\$34.41
Restaurant / Bakery	\$53.08
Industrial High Flow	\$18.80
Car Wash	\$20.19

Using the account growth percentages in Table 3-2, the total Equivalent Dwelling Units (or EDUs) in each customer class was projected for the Study period. Utilizing EDUs allows the development of a unit that creates parity across different customers. It creates a base unit to which all parcels are compared in magnitude. For example, a residential customer is represented by a defined number of fixtures, wastewater flow quantity, and effluent strength. A school would then be allocated a number of EDUs based on how its values for these metrics compare to a residential customer’s values.

Table 4-2: Projected EDU Totals by Customer Class

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Residential	36,684	36,720	36,757	36,794	36,831
Multi Family	6,566	6,572	6,579	6,585	6,592
Commercial Spaces	2,049	2,051	2,053	2,055	2,057
Commercial	3,391	3,394	3,398	3,401	3,405
School ⁵	820	820	820	820	820
Market / Mortuary	276	277	277	277	278
Restaurant / Bakery	1,772	1,774	1,776	1,778	1,779
Industrial High Flow	3,425	3,428	3,432	3,435	3,439
Car Wash	95	96	96	96	96
Total EDUs	55,078	55,133	55,187	55,241	55,296

*Schools are expecting no growth in accounts, therefore EDUs remain the same.

Referring to Table 4-1 and Table 4-2 above, the monthly fixed revenue is calculated by multiplying the total class EDUs by the fixed charge rate, then multiplying this monthly revenue by twelve months to arrive at the annual Wastewater Enterprise revenue. The total revenue from residential customers is calculated below as an example.

$$\text{fixed charge rate} \times \text{number of EDUs} \times 12 \text{ months}$$

$$\$28.78 \times 36,684 \times 12 = \$12.7M$$

The same calculation is repeated for all meter sizes and then added together to determine the total monthly service charge revenue for all customers. For FY 2018, the projected monthly fixed charge revenue \$19.1M as shown in Table 4-3.

Table 4-3: Revenue from Current Rates

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Monthly Service Charge	\$19,114,765	\$19,133,681	\$19,152,617	\$19,171,571	\$19,190,544

⁵ Schools are expecting no growth in accounts, therefore EDUs remain the same.

4.1.1 Miscellaneous Revenue

In addition to revenue from rates, the Wastewater Enterprise also receives miscellaneous revenues from different sources such as grease recycling, reclaimed water, and filming, shown in Table 4-4.

Table 4-4: Projected Miscellaneous Revenue

Fund 621	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Rental Revenues	\$63,900	\$63,900	\$65,817	\$67,792	\$69,826
Reclaimed water	\$300,000	\$300,000	\$309,000	\$318,270	\$327,818
Grease Diversion	\$350,000	\$350,000	\$360,500	\$371,315	\$382,454
Frappo Recycling	\$80,000	\$80,000	\$82,400	\$84,872	\$87,418
Filming, Photoshoots, Bees	\$2,000	\$2,000	\$2,060	\$2,122	\$2,185
Fund 622					
Residential Connection Fees	\$300,000	\$300,000	\$303,000	\$306,030	\$309,090
Commercial Connection Fees	\$300,000	\$300,000	\$303,000	\$306,030	\$309,090
Interest Income	\$15,000	\$15,000	\$15,150	\$15,302	\$15,455
Total Miscellaneous Revenue	\$1,410,900	\$1,410,900	\$1,440,927	\$1,471,732	\$1,503,337

4.2 O&M EXPENSES

O&M expenses include the cost of operating and maintaining wastewater collection, treatment, and disposal facilities, as well as the costs of providing technical services such as laboratory services and other administrative costs of the wastewater system, such as customer service and billing. The City's FY 2017 and FY 2018 budget values and the assumed inflation factors for the study period were used as the basis for projecting O&M costs. Table 4-5 summarizes budgeted and projected O&M expenses for the Wastewater Enterprise during the Study period. Note that Benefits are now included in Salaries.

Table 4-5: Projected O&M Costs

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Salaries & Benefits	\$6,966,208	\$7,307,569	\$7,417,183	\$7,528,440	\$7,641,367
Maintenance & Operations	\$7,998,566	\$8,060,256	\$8,221,461	\$8,385,890	\$8,553,608
Total O&M Expenses⁶	\$14,964,774	\$15,367,825	\$15,638,644	\$15,914,331	\$16,194,975

4.3 DEBT

4.3.1 Current Debt

The City is currently paying a debt service under Fund 624 on three existing debts, all of which will be retired during the Study period. The City does not project that it will incur further debt during the Study period.

⁶ For modeling purposes, Asset Replacement costs are included in CIP and are not included in O&M, as shown in the City's adopted Operating Budget. Therefore, the O&M totals shown in the table may not align with the City's adopted Operating Budget.

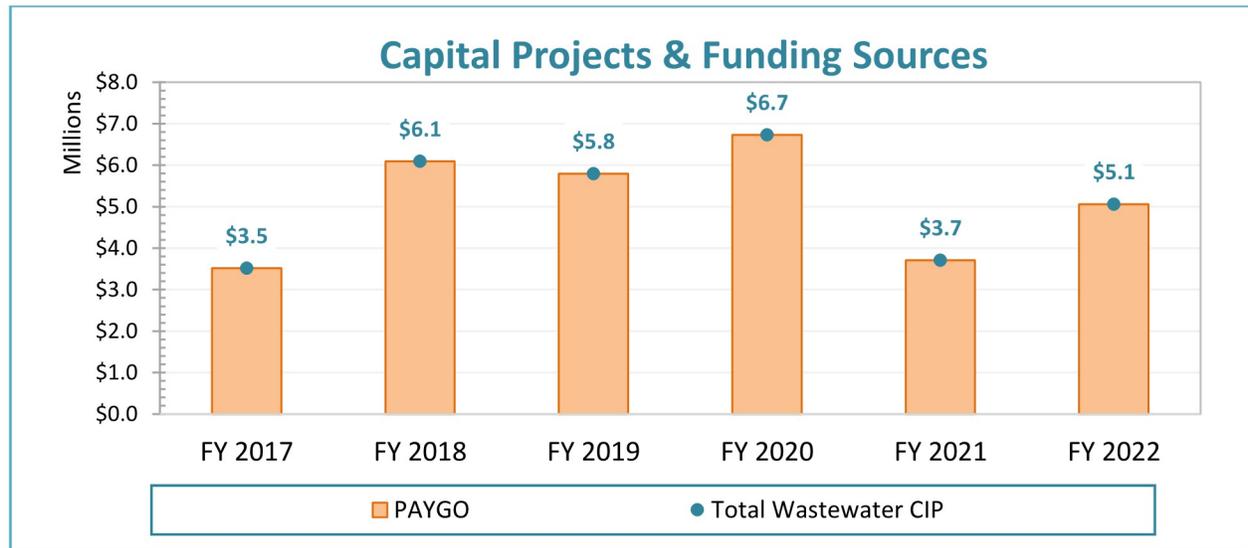
Table 4-6: Current Debt Service Schedule

Debt	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
1998 SWRCB SRF Loan					
Principal	\$141,773	\$145,045	\$0	\$0	\$0
Interest	\$6,884	\$3,481	\$0	\$0	\$0
Total Payment	\$148,657	\$148,526	\$0	\$0	\$0
2010 Wastewater Revenue Refunding Bonds					
Principal	\$1,280,000	\$1,335,000	\$1,370,000	\$0	\$0
Interest	\$116,488	\$62,794	\$20,550	\$0	\$0
Total Payment	\$1,396,488	\$1,397,794	\$1,390,550	\$0	\$0
2000 SWRCB SRF Loan					
Principal	\$1,781,312	\$1,829,407	\$1,876,801	\$1,929,529	\$1,981,626
Interest	\$253,818	\$205,723	\$156,329	\$105,601	\$53,504
Total Payment	\$2,035,130	\$2,035,130	\$2,033,130	\$2,035,130	\$2,035,130
Total Wastewater Enterprise Debt Service	\$3,580,275	\$3,581,450	\$3,423,680	\$2,035,130	\$2,035,130

4.4 PROGRAMMED CAPITAL IMPROVEMENT PROJECTS (CIP)

The City has adopted a 5-year CIP through FY 2022 to address future Wastewater Enterprise needs. Based on the Asset Management Plan Study performed by GHD, a 100-year asset CIP plan through FY 2113 was included to address the CIP needs of existing infrastructure as they come due. Average CIP revenue needs are approximately \$5.4M per year during the Study period of FYs 2018-2022. The proposed capital improvement plan will be funded entirely through rate revenues (Pay As You Go or PAYGO) and reserves.

Figure 4-1: Programmed Wastewater Capital Expenses⁷



⁷ RFC's projected capital expenses include a capital escalation factor of 2% and therefore may not align with the City's adopted budget. In addition, Figure 4 1 includes asset replacement costs from Fund 629.

4.5 STATUS QUO FINANCIAL PLAN

Table 4-7 displays the pro forma of the City’s Wastewater Enterprise under current rates over the Study period. All projections shown in the table are based upon the City’s current rate structure, developed in the 2013 study, and do not yet include any rate adjustments. The pro-forma incorporates the data shown in Table 4-3 for revenues from current rates, Table 4-4 for miscellaneous revenues, Table 4-5 for O&M expenses, Table 4-6 for debt service, and Figure 4-1 for CIP. Note that interest is also calculated on the fund balance and used as additional revenue.

Table 4-7: Status Quo Financial Plan Pro-Forma

Line No.		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
1	REVENUES					
2	Revenues from Rates	\$19,114,765	\$19,133,681	\$19,152,617	\$19,171,571	\$19,190,544
3	Revenue Adjustments	\$0	\$0	\$0	\$0	\$0
4	Interest Income	\$647,283	\$585,796	\$522,329	\$443,764	\$427,750
5	Other Revenues	\$1,410,900	\$1,410,900	\$1,434,777	\$1,459,370	\$1,484,701
6	TOTAL REVENUES	\$21,172,948	\$21,130,377	\$21,109,723	\$21,074,705	\$21,102,996
7						
8	O&M EXPENSES	\$14,964,774	\$15,367,825	\$15,638,644	\$15,914,331	\$16,194,975
9						
10	NET REVENUES	\$6,208,174	\$5,762,552	\$5,471,079	\$5,160,374	\$4,908,021
11						
12	DEBT SERVICE					
13	Existing Debt	\$3,580,275	\$3,581,450	\$3,423,680	\$2,035,130	\$2,035,130
14	Proposed Debt	\$0	\$0	\$0	\$0	\$0
15	TOTAL DEBT SERVICE	\$3,580,275	\$3,581,450	\$3,423,680	\$2,035,130	\$2,035,130
16						
17	CIP EXPENSES					
18	PAYGO Funded	\$6,092,076	\$5,795,650	\$6,731,050	\$3,709,750	\$5,061,500
19	Debt Funded	\$0	\$0	\$0	\$0	\$0
20	TOTAL CIP EXPENSES	\$6,092,076	\$5,795,650	\$6,731,050	\$3,709,750	\$5,061,500
21						
22	NET CASH FLOWS	-\$3,464,177	-\$3,614,548	-\$4,683,651	-\$584,506	-\$2,188,609
23						
24	BEGINNING BALANCES	\$42,840,864	\$38,729,404	\$34,529,060	\$29,323,080	\$28,294,811
25	ENDING BALANCES	\$39,376,687	\$35,114,856	\$29,845,409	\$28,738,574	\$26,106,201
26	TARGET BALANCES	\$24,341,194	\$24,441,956	\$24,509,661	\$24,578,583	\$24,648,744

Under the ‘status-quo’ scenario, revenues generated from rates and other miscellaneous revenues are adequate to sufficiently recover total operating expenses and current debt service of the wastewater enterprise for nearly all years of the Study period. However, the demands placed on the aggregated funds of projected CIP requirements cause rapid annual drawdown from the WW fund balance.

4.6 RECOMMENDATIONS AND PROPOSED FINANCIAL PLAN

To ensure that the Wastewater Enterprise will have adequate revenues to fund operating and capital expenses, RFC recommends the City adjust revenues by 1%. The revenue adjustments are scheduled to be implemented in January of each year. The proposed revenue adjustments would enable the enterprise to complete the planned capital projects for the Study period while maintaining the wastewater fund at the recommended reserve level.

Table 4-8: Proposed Wastewater Revenue Adjustments

Effective Date	Proposed Wastewater Revenue Adjustments
January 2018	1 percent
January 2019	1 percent
January 2020	1 percent
January 2021	1 percent
January 2022	1 percent

4.6.1 Proposed Financial Plan

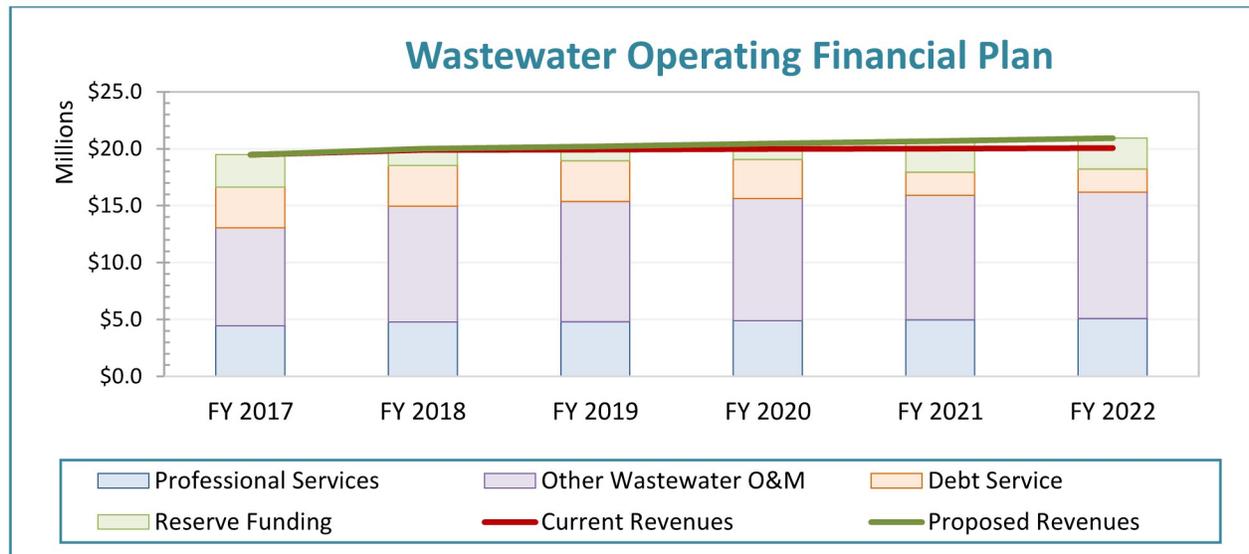
A pro forma of the proposed 5-year financial plan is shown in Table 4-9. The proposed financial plan successfully meets the City’s financial needs, exceeding target reserve balances throughout the study period while addressing the City’s O&M and CIP needs.

Table 4-9: Proposed Financial Plan Pro-Forma

Line No.		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
1	REVENUES					
2	Revenues from Rates	\$19,114,765	\$19,133,681	\$19,152,617	\$19,171,571	\$19,190,544
3	Revenue Adjustments	\$95,574	\$287,962	\$482,656	\$679,680	\$879,062
4	Interest Income	\$647,283	\$585,796	\$522,329	\$443,764	\$427,750
5	Other Revenues	\$1,410,900	\$1,410,900	\$1,434,777	\$1,459,370	\$1,484,701
6	TOTAL REVENUES	\$21,268,522	\$21,419,773	\$21,604,292	\$21,779,875	\$22,024,257
7						
8	O&M EXPENSES	\$14,964,774	\$15,367,825	\$15,638,644	\$15,914,331	\$16,194,975
9						
10	NET REVENUES	\$6,303,748	\$6,051,948	\$5,965,649	\$5,865,544	\$5,829,282
11						
12	DEBT SERVICE					
13	Existing Debt	\$3,580,275	\$3,581,450	\$3,423,680	\$2,035,130	\$2,035,130
14	Proposed Debt	\$0	\$0	\$0	\$0	\$0
15	TOTAL DEBT SERVICE	\$3,580,275	\$3,581,450	\$3,423,680	\$2,035,130	\$2,035,130
16						
17	CIP EXPENSES					
18	PAYGO Funded	\$6,092,076	\$5,795,650	\$6,731,050	\$3,709,750	\$5,061,500
19	Debt Funded	\$0	\$0	\$0	\$0	\$0
20	TOTAL CIP EXPENSES	\$6,092,076	\$5,795,650	\$6,731,050	\$3,709,750	\$5,061,500
21						
22	NET CASH FLOWS	-\$3,368,603	-\$3,325,153	-\$4,189,081	\$120,664	-\$1,267,348
23						
24	BEGINNING BALANCES	\$42,840,864	\$38,824,978	\$34,912,596	\$30,195,421	\$29,859,194
25	ENDING BALANCES	\$39,472,261	\$35,499,825	\$30,723,514	\$30,316,086	\$28,591,846
26	TARGET BALANCES	\$24,341,194	\$24,441,956	\$24,509,661	\$24,578,583	\$24,648,744

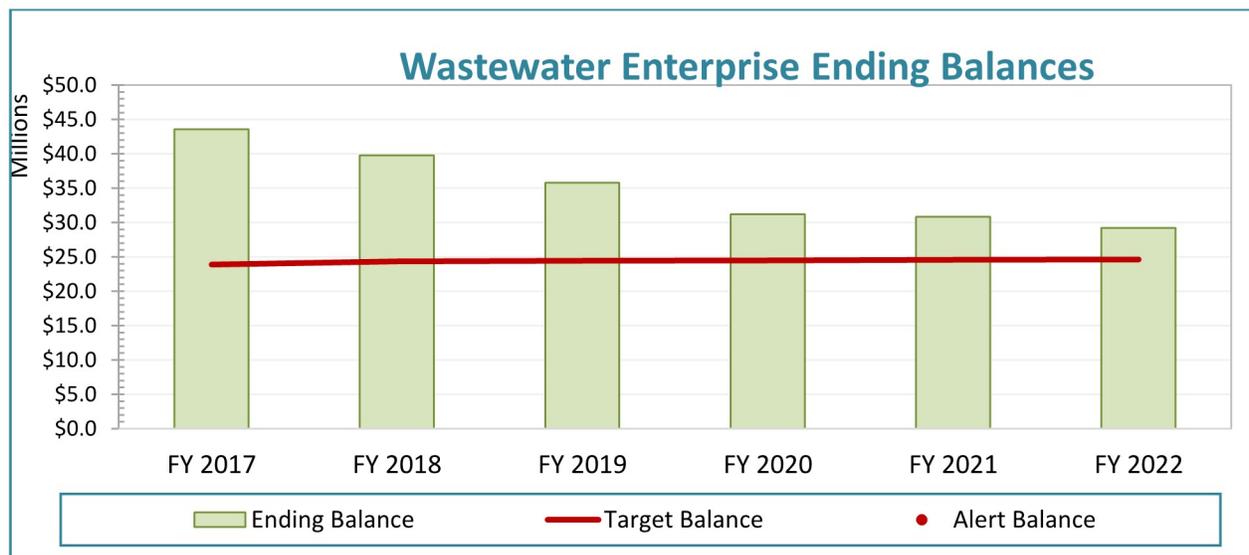
Figure 4-2 illustrates the operating position of the Wastewater Enterprise, where the expenses and reserve funding are shown by stacked bars and total revenues at current rates and proposed rates are shown by red and green lines, respectively.

Figure 4-2: Proposed Operating Financial Plan



The ending fund balance for the Wastewater Enterprise is projected and shown in Figure 4-3, where the red line indicates the target reserve balance as recommended by the reserve policy discussed in Section 3. Under the proposed financial plan, the ending fund balance exceeds the target reserve for all years.

Figure 4-3: Ending Balance for Wastewater Fund



5. PROPOSED RATES

Applying the proposed revenue adjustments from Table 4-8 to the current monthly fixed charges yields the proposed monthly fixed charges for the Study period in Table 5-1. Note that while the table includes proposed rates for FYs 2020-2022, the City will only be implementing rates for FYs 2018-2019.

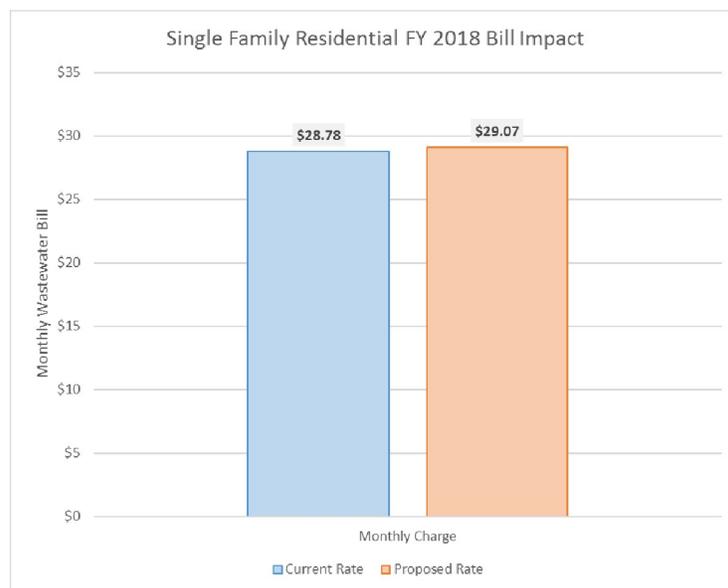
Table 5-1: Proposed Monthly Service Charge

	FY 2017 Current	FY 2018 Proposed	FY 2019 Proposed	FY 2020 Proposed	FY 2021 Proposed	FY 2022 Proposed
Rev Adj.		1%	1%	1%	1%	1%
Residential	\$28.78	\$29.07	\$29.37	\$29.67	\$29.97	\$30.27
Multi Family	\$28.78	\$29.07	\$29.37	\$29.67	\$29.97	\$30.27
Commercial Spaces	\$28.78	\$29.07	\$29.37	\$29.67	\$29.97	\$30.27
Commercial	\$28.78	\$29.07	\$29.37	\$29.67	\$29.97	\$30.27
School	\$20.16	\$20.37	\$20.58	\$20.79	\$21.00	\$21.21
Market / Mortuary	\$53.16	\$53.70	\$54.24	\$54.79	\$55.34	\$55.90
Restaurant (grease traps)	\$34.41	\$34.76	\$35.11	\$35.47	\$35.83	\$36.19
Restaurant / Bakery	\$53.08	\$53.62	\$54.16	\$54.71	\$55.26	\$55.82
Industrial High Flow	\$18.80	\$18.99	\$19.18	\$19.38	\$19.58	\$19.78
Car Wash	\$20.19	\$20.40	\$20.61	\$20.82	\$21.03	\$21.25

5.1 BILL COMPARISON

As shown in Figure 5-1, Single Family Residential customers will see a slight increase in their wastewater bills since they are only charged a fixed rate.

Figure 5-1: Single Family Residential Bill Impact



6. APPENDIX A – DETAILED 5-YEAR CIP

Fund 624 - Wastewater Capital Program	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Wastewater Pipe and Maintenance Hole Relining FY 2017-18	\$1,500,000	\$0	\$0	\$0	\$0	\$0
Hill Canyon Treatment Plant - Reclaimed Water Pipeline	\$0	\$0	\$0	\$0	\$0	\$2,650,000
Interceptor Capital Improvement Program Phase V - Unit Y2	\$1,350,000	\$1,100,000	\$0	\$0	\$0	\$0
Hauser Circle Wastewater Mainline Extension	\$300,000	\$0	\$0	\$0	\$0	\$0
Hill Canyon Treatment Plant Polymer Facility	\$0	\$0	\$0	\$618,000	\$0	\$0
Hill Canyon Treatment Plant Lighting Upgrade	\$110,600	\$50,000	\$0	\$0	\$0	\$0
Lawrence Drive Lift Station Expansion	\$130,000	\$145,000	\$0	\$0	\$0	\$0
Wastewater Pipe and Maintenance Hole Relining FY 2018-19	\$0	\$0	\$1,522,500	\$0	\$0	\$0
Hill Canyon Treatment Plant 3-D Geographical Informational System Assets Integration	\$0	\$0	\$0	\$257,500	\$209,000	\$0
Santa Rosa Road/Hill Canyon Road Intersection Improvements	\$0	\$50,000	\$253,750	\$0	\$0	\$0
Hill Canyon Treatment Plant Biosolids Drying	\$0	\$0	\$304,500	\$1,030,000	\$0	\$0
Municipal Service Center/Hill Canyon Treatment Plant Access Road	\$0	\$0	\$253,750	\$0	\$0	\$1,590,000
Chlorine Contact Chamber Covers Replacement	\$0	\$550,000	\$0	\$0	\$0	\$0
Creek Flow Metering Station Installation	\$0	\$0	\$233,450	\$0	\$0	\$0
Hill Canyon Treatment Plant Bioreactors Electrical Upgrades	\$0	\$150,000	\$812,000	\$0	\$0	\$0
Fats, Oils, and Grease Station	\$0	\$0	\$0	\$0	\$1,254,000	\$0
Hill Canyon Treatment Plant Security Cameras	\$0	\$190,000	\$0	\$0	\$0	\$0
Hill Canyon Treatment Plant Retaining Wall	\$0	\$0	\$0	\$669,500	\$0	\$0
Unit W Improvements	\$0	\$0	\$203,000	\$1,545,000	\$0	\$0
Wastewater Pipe and Maintenance Hole Relining FY 2020-21	\$0	\$0	\$0	\$0	\$1,567,500	\$0
Hill Canyon Treatment Plant Solar System Purchase	\$0	\$1,400,000	\$0	\$0	\$0	\$0
Wastewater Collection System Miscellaneous Repairs	\$0	\$250,000	\$253,750	\$257,500	\$261,250	\$265,000
Unit E Interceptor	\$0	\$0	\$0	\$927,000	\$0	\$0
Hill Canyon Treatment Plant Coating/Concrete Rehabilitation	\$0	\$80,000	\$609,000	\$0	\$0	\$0
Digester Rehabilitation	\$0	\$780,000	\$791,700	\$803,400	\$0	\$0
Miscellaneous Wastewater System Repairs/Upgrades	\$0	\$500,000	\$507,500	\$412,000	\$418,000	\$424,000
Hill Canyon Treatment Plant Master Plan	\$0	\$350,000	\$0	\$0	\$0	\$0
Municipal Service Center Fueling Station Upgrade	\$100,000	\$100,000	\$0	\$0	\$0	\$0
Municipal Service Center Solar Covered Vehicle Canopies	\$0	\$0	\$0	\$211,150	\$0	\$0
Municipal Service Center Flat Roofs	\$0	\$87,500	\$0	\$0	\$0	\$0
Municipal Service Center Parking Lot Repaving	\$0	\$0	\$0	\$0	\$0	\$132,500
Fund 629 – Wastewater Fleet Replacement	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Fleet Replacement	\$27,691	\$309,576	\$50,750	\$0	\$0	\$0
TOTAL CIP	\$3,518,291	\$6,092,076	\$5,795,650	\$6,731,050	\$3,709,750	\$5,061,500